

REMARKS

In response to the present office action, Applicant has amended the drawings, specification, and claims. A Supplemental Data Sheet was previously filed on December 23, 2004 to comply with 37 CFR 1.67(a) as cited by the Examiner. Applicant appreciates the suggestions offered by the Examiner to overcome the various cited objections.

The present invention comprises a disk clamp for securing a disk to the hub of a motor in a hard disk drive. The clamp has a circumferential rib protruding from a lower surface of the disk clamp. The rib has a radially inner surface or wall that is smooth. A complementary recess is formed in the hub of the spindle motor. The recess has a radially outer wall that is also smooth. The smooth outer wall closely receives the smooth inner wall by interference fit. This close tolerancing provides a very precise centering feature for mounting and aligning the clamp on the hub and motor. Alternatively, the clamp has a central aperture that directly engages an end of the upper bearing sleeve on the hub. In this version, the inner diameter of the aperture and the outer diameter of the bearing sleeve are closely toleranced to provide the very precise centering feature for mounting and aligning the clamp on the hub.

In contrast, the cited prior art reference (*Lee*) discloses a clamp 15 with a threaded post 31. As shown in Figures 3 and 5 of *Lee*, the threads are on the outer wall of the post 31. Col. 5, lines 35 – 46. The outer threads on post 31 engage inner threads in groove 20b on the hub 20. Col. 6, lines 32 – 35. *Lee* then uses optional screws 41 "to additionally secure the disk clamp 30" on the spindle motor hub 20. Col. 6, lines 30 – 31. Thus, *Lee* not only uses a different geometric configuration compared to Applicant's invention, but it also requires the use of threaded assemblies rather than close tolerances to achieve its objectives.

Each of the claims of the present application are readily distinguishable over *Lee*. For example, Claim 1 states that the clamp rim has an inner wall and that the hub recess has an outer wall. This geometry alone is enough to distinguish *Lee*. However, in order to further clarify the relationship between the inner and outer walls, Claim 1 also now requires the clamp's inner wall to be "radially outboard of the outer wall of the hub." This language readily distinguishes all of

the embodiments of *Lee*. Claim 1 concludes with, "the disk clamp being centered on the hub by engaging the inner wall of the disk clamp with the outer wall of the hub such that the annular rim of the disk clamp is closely received by and seats in the annular recess in the hub." This language again emphasizes the interference fit between the clamp and hub. Claim 1 is not anticipated by *Lee* and is in condition for allowance.

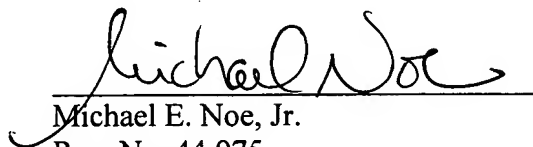
Claims 2 – 4 depend from Claim 1 and are allowable for the same reasons as Claim 1. In addition, each of these claims contains language that further distinguishes *Lee*. For example, Claim 2 states, "the annular recess is located radially between the bolt circle diameter and the outer circumference." *Lee*'s Figure 5 clearly shows that its groove 20b is radially inboard of the bolt circle diameter defined by holes h₂. The language of Claim 2 also appears in Claim 9, which was indicated as being allowable on page 7, paragraph 10, of the present office action. Claim 3 was given the same indication in that paragraph. Claim 4 was rewritten to state, "the inner and outer walls are free of threads." In contrast to *Lee*, the fit between Applicant's clamp and hub is achieved by close tolerancing, not threads. Each of these claims is allowable over the prior art.

Independent Claims 5 and 12 and their dependent claims are each directed to joining the clamp to the bearing assembly of the hub. The word "bearing" does not even appear in the specification of *Lee*, nor does any illustration of a bearing appear in that reference. Applicant strongly disagrees with the rejection of Claims 5 – 7 and 12 – 13 since it is impossible for these claims to read on *Lee*.

Finally, independent method Claim 8 contains the same elements as Claim 1 is likewise allowable. The language of Claim 8 includes defining the inner wall to be "radially outboard of the outer wall." As stated above, *Lee* has threads and they are on the outer wall of the post 31. The outer threads on post 31 engage inner threads in groove 20b on the hub 20. Thus, *Lee* specifies a different geometric configuration and it requires threaded assemblies rather than close tolerances.

It is respectfully submitted that the claims are in condition for allowance and favorable action is requested. No fee for an extension of time or other fees are believed to be required. However, in the event that one or more fees are required, please charge them to **Hitachi Global Storage Technologies' Deposit Account Number 50-2587**.

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